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EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/071,243	KIM ET AL.	
	Examiner	Art Unit	
	Robert W. Wilson	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2002* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Specification

1. The disclosure is objected to because of the following informalities:

The examiner objects to the usage of conventional art on Pgs 8 lines 6 and 16 in the specification. The examiner suggests that the applicant amend the specification to state prior art.

On Pg 9 line 20 Figure 2 refers the mobile station and not the base station. Also on Pg 9 line 23 Fig 3 refers to the base station and not the mobile station.

On Page 10 line 1 the determination is 34 and not 24. Also the determination is Fig 3 not Figure 2. Appropriate correction is required.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 39-40 & 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The meaning of claim 39 is unclear. What is meant by "wherein the data rate information is set as "increase" if a remaining transmission power of each mobile is above a threshold, if the number of bits to be sent within a transmission buffer is above a threshold, and if the data rate of a current transmission is below a maximum data rate"?

The meaning of claim 40 is unclear. What is meant by "wherein the data rate information is set as "unchanged" if at most, two conditions of a group comprising: if a remaining transmission power of each mobile is above a threshold, if the number of bits to be sent within a transmission buffer is above a threshold, and if the data rate of a current transmission is below a maximum data rate, are satisfied"?

Claim 44 is unclear. What is meant by "wherein during the comparison of the transmission condition value, which corresponds to the transmitted pilot signal strength the reverse link data transmission rate, with the threshold value, a decreased rate bit is formed if the transmission condition value is greater than the threshold, value, an increase rate bit is formed if the transmission condition value is smaller than twice the threshold value, and maintain rate bit is formed for the current data transmission for conditions other than those for forming the decrease rate bit or the increase rate bit"

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 43-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claim 43, the specification on Pg 29 lines 19-20 states that the ROT is measured based upon a range and compared to a plurality of thresholds. Where in the specification does it state that "wherein the data transmission control threshold is either maintained if the total interference level is within a fixed range, increased if the total interference level is less than the fixed rate, or decreased if the total interference level is greater that the fixed range"?

Referring to claim 44, where the specification does it state "wherein during the comparison of the transmission condition value, which corresponds to the transmitted pilot signal strength the reverse link data transmission rate, with the threshold value, a decreased rate bit is formed if the transmission condition value is greater than the threshold, value, an increase rate bit is formed if the transmission condition value is smaller than twice the threshold value, and maintain rate bit is formed for the current data transmission for conditions other than those for forming the decrease rate bit or the increase rate bit"

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3, 6-8, 11-14, 17-20, 22, 25, 36-38, 41-42, & 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen (U. S. Patent No.; 5,603,096) in view of Guo (U.S. Patent No.: 6,389,034)

Referring to claim 1, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station determines SNR which means the base inherently measures noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station determines SNR which means the base inherently signal or energy per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station compares the SNR to a threshold or compares the interference to energy level per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. Gilhousen does not expressly call for: adjusting or controlling a data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner. Guo teaches base station adjusts transmission rate based upon interference level by sending message over a Packet Data control channel per col. 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting or controlling a

data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

In addition Gilhousen teaches:

Regarding claim 6, transmission energy level is based on currently assigned data transmission rate per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Regarding claim 7, comparison performed based upon transmission energy level is based on a currently assigned data transmission rate per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Referring to claim 2, the combination of Gilhousen and Guo teaches the method of claim 1,
The combination of Gilhousen and Guo do not expressly call for: further comprising a step of generating a rate control bit based on the comparison result, the RCB indicating how a current data transmission rate of a respective mobile station is to be adjusted.
Guo teaches: sending a rate control in a PDCB channel per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 3, the combination of Gilhousen and Guo teaches the method of claim 2,
The combination of Gilhousen and Guo do not expressly call for: wherein the RCB is inserted into certain bit position in a channel slot of the common channel .
Guo teaches: sending a rate control in a PDCB channel which is inherently inserted as certain bits in a certain slot in a common channel per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 8, the combination of Gilhousen and Guo teaches the method of claim 1,
The combination of Gilhousen and Guo do not expressly call for: wherein the comparison result includes a data rate control parameter generated by each base station indicating whether a particular mobile station should increase, decrease or maintain its current data transmission rate.
Guo teaches: sending a rate control in a PDCB channel which is inherently indicates whether a particular mobile station should increase, decrease or maintain its current data transmission rate per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 11, the combination of Gilhousen and Guo teaches the method of claim 3,

The combination of Gilhousen and Guo do not expressly call for: wherein the common channel is newly defined per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add new common channel Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 12, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station determines SNR which means the base inherently measures noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station determines SNR which means the base inherently signal or energy per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station compares the SNR to a threshold or compares the interference to energy level per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. Gilhousen does not expressly call for: sending the comparison result via a common channel on a forward link to each mobile station in a dedicated manner in accordance with the comparing. Guo teaches base station adjusts transmission rate based upon interference level by sending message over a Packet Data control channel per coll 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or sending the comparison result via a common channel on a forward link to each mobile station in a dedicated manner in accordance with the comparing.

. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

In addition Gilhousen teaches:

Regarding claim 17, transmission energy level is based on currently assigned data transmission rate per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Referring to claim 13, the combination of Gilhousen and Guo teaches the method of claim 12, The combination of Gilhousen and Guo do not expressly call for: further comprising a step of generating a rate control bit based on the comparison result, the RCB indicating how a current data transmission rate of a respective mobile station is to be adjusted.

Guo teaches: sending a rate control in a PDCB channel per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 14, the combination of Gilhousen and Guo teaches the method of claim 13, The combination of Gilhousen and Guo do not expressly call for: wherein the RCB is inserted into certain bit position in a channel slot of the common channel .

Guo teaches: sending a rate control in a PDCB channel which is inherently inserted as certain bits in a certain slot in a common channel per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 18, the combination of Gilhousen and Guo teaches the method of claim 12, The combination of Gilhousen and Guo do not expressly call for: wherein the comparison result includes a data rate control parameter generated by each base station indicating whether a particular mobile station should increase, decrease or maintain its current data transmission rate. Guo teaches: sending a rate control in a PDCB channel which is inherently indicates whether a particular mobile station should increase, decrease or maintain its current data transmission rate per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 19, the combination of Gilhousen and Guo teaches the method of claim 14, The combination of Gilhousen and Guo do not expressly call for: wherein the common channel is newly defined per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add new common channel Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

Referring to claim 20, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station compares the SNR to a threshold or compares the interference to energy level per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30 or determining a transmission energy level required for transmitting to the base station as well as the comparison result being obtained by comparing the transmission energy level and an interference level of signal sent to the base station by the mobile. The mobile station sends packets back based upon the power signal sent for adjusting per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Gilhousen does not expressly call for: adjusting a data transmission rate based upon a comparison result received from the base station in a dedicated manner via a common channel. Guo teaches base station adjusts transmission rate based upon interference level by sending message over a Packet Data control channel per coll 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or sending the comparison result via a common channel on a forward link to each mobile station in a dedicated manner in accordance with the comparing. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

Referring to claim 25, the combination of Gilhousen and Guo teaches the method of claim 20,

The combination of Gilhousen and Guo do not expressly call for: wherein the common channel is newly defined per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add new common channel Guo to the method of the combination of Gilhoussen and Guo in order to build a device which minimizes the interference.

In addition Gilhousen teaches:

Regarding claim 22, comparison performed based upon transmission energy level is based on a currently assigned data transmission rate per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Referring to claim 36, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station determines SNR which means the base inherently measures total noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station determines SNR which means the base inherently determine signal or energy per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The specification broadly defines "cell interference probability of a mobile" on Pg 23 lines 5-10 of the specification. The applicant so broadly defines "cell interference probability" that the examiner interprets measuring interference as determining cell interference probability associated with a mobile. Since the

noise or interference level is a measured value it inherently takes into account the probability of the interference associated with each mobile station. A signal is sent by the mobile to the base station which the base station uses to determine the signal to noise ratio which the examiner interprets receiving data rate information of each mobile per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station compares the SNR to a threshold or compares the interference to energy level and determines the power level or transmission level of the mobile per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. Gilhousen does not expressly call for: generating data rate control information in accordance with the total interference amount, the trannsmission energy level, and the data rate information for controlling a data transmission rate on a reverse link.

Guo teaches: generating data control information accordance with interference level which is utilized for transmission on a reverse link by sending message over a Packet Data control channel per col. 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting or controlling a data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner. The base station adjusts transmission rate based upon interference level by sending message over a Packet Data control channel per col. 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting or controlling a data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate

adjustment based upon interference level energy level adjustment of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

In addition Gilhousen teaches:

Regarding claim 37, the specification broadly defines "cell interference probability of a mobile" on Pg 23 lines 5-10 of the specification. The applicant so broadly defines "cell interference probability" that the examiner interprets measuring interference as determining cell interference probability associated with a mobile. Since the noise or interference level is a measured value it inherently takes into account the probability of the interference associated with each mobile station per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.

Regarding claim 38, the specification broadly defines "cell interference probability of a mobile" on Pg 23 lines 5-10 of the specification. The applicant so broadly defines "cell interference probability" that the examiner interprets measuring interference as determining cell interference probability associated with a mobile. Since the noise or interference level is a measured value it inherently takes into account the probability of the interference associated with each mobile station per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.

the base station determines SNR which means the base inherently measures noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station determines SNR which means the base inherently signal or energy per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The base station compares the SNR to a threshold or compares the interference to energy level in order to determine the transmission energy associated with a specific data rate per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30

Referring to claim 41, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale.

The base station determines SNR which means the base inherently measures noise or interference from a signal provided by the mobile which the examiner interprets as a pilot per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.
The base station compares the SNR to a threshold or compares the interference to energy level per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.

Gilhousen does not expressly call for: adjusting or controlling a data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner.

Guo teaches base station adjusts transmission rate based upon interference level by sending message over a Packet Data control channel per col. 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting or controlling a data transmission rate for each mobile station based upon the comparison result sent via a common channel or a forward link to each mobile station in a dedicated manner. It would have been obvious to one of ordinary skill in the art at the time of

the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

Referring to claim 42, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station determines SNR which means the base inherently measures total noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.
The mobile sends the base a signal which the examiner has interpreted as a pilot because it performs the same function. The base station determines SNR per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. The signal in signal to noise ration inherently represents the average power of data transmission. The noise in signal to noise ratio inherently represents the interference or channel condition. The base station compares the SNR to a threshold or compares the interference to energy level and determines the power level or comparing the channel condition value with a transmission threshold of the base station calculated by an interference at the base station per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. Gilhousen does not expressly call for: adjusting a data transmission rate for each mobile station based upon the comparison result sent via a channel on a forward link to each mobile in a dedicated manner. Guo teaches: generating data control information accordance with interference level which is utilized for transmission on a reverse link by sending message over a Packet Data control

channel per col 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting a data transmission rate for each mobile station based upon the comparison result sent via a channel on a forward link to each mobile in a dedicated manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

Referring to claim 45, Gilhousen teaches: a method of controlling the power on a reverse link between a mobile to base communication system per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement as a plurality of base stations and mobile stations in order for the network to scale. The base station determines SNR which means the base inherently measures total noise or interference per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30.
The mobile sends the base a signal which the examiner has interpreted as a pilot because it performs the same function. The mobile sends the base a signal at a frequency which the base uses the signal value to determine the transmission rate. The base station determines SNR per Fig 3 or per col. 4 lines 11-26 & col. 4 lines 40-col. 5 line 30. Gilhousen does not expressly call for: generating and sending to the mobile station , a reverse link data transmission rate command. Guo teaches: generating and sending to the mobile station , a reverse link data transmission rate command which is utilized for transmission on a reverse link by sending message over a Packet Data control channel per col 4 line 48-67 & per col. 5 lines 21-49 and per Fig 4A or adjusting a data transmission rate for each mobile station based upon the comparison result sent via a

channel on a forward link to each mobile in a dedicated manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate adjustment based upon interference level of Guo to the system of Gilhousen in order to improve the throughput between the mobile and the base station.

9. Claim 26-28 & 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samamoto (EPO No.: EP 1 067 729 A2) in view of Guo (U.S. Patent No.: 6,389,034)
Referring to claim 26, Samamoto teaches: 20 per Fig 3 or base station apparatus in a mobile communication system for controlling a data transmission rate on a reverse link. The BSS Observation Section 23 per Fig 3 determines the signal and noise per Para [0031] or determining means. The BSS Control Section 24 per Fig 3 determines S/N per Para [0031] or comparing means. The BSS Radio section 21 per Fig 3 or transceiver which sends comparison result per Para [0031] and the receiver is connected to 23 & 24 per Fig 3. Samamoto does not expressly call for: sending the result via a common channel on a forward link but teaches sending rate info via a channel. Guo teaches: sending the result via a Packet Data Control Channel or common channel per col 4 lines 48-67 and per col. 5 lines 121-49 and per Fig 4A. It would have been obvious to one of ordinary skill in the art at the time of the invention to add utilizing a common control channel of Guo in place of the channel of Samamoto in order to be standards compliant.

In addition Samamoto teaches:
Regarding claim 34, the applicant broadly claims next generation code division multiple access system or apparatus. The reference teaches for a wide band CDMA apparatus per Para [0002] .

It would have been obvious to one of ordinary skill in the art at the time of the invention that a wideband CDMA is a next generation CDMA system or apparatus.

Referring to claim 27, the combination of Samamoto and Guo teaches the apparatus of claim 26, The combination of Samamoto and Guo do not expressly call for: further comprising a step of generating a rate control bit based on the comparison result, the RCB indicating how a current data transmission rate of a respective mobile station is to be adjusted.
Guo teaches: sending a rate control in a PDCB channel per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the apparatus of the combination of Samamoto and Guo in order to build a device which minimizes the interference.

Referring to claim 28, the combination of Samamoto and Guo teaches the apparatus of claim 26, The combination of Samamoto and Guo do not expressly call for: wherein the RCB is inserted into certain bit position in a channel slot of the common channel .
Guo teaches: sending a rate control in a PDCB channel which is inherently inserted as certain bits in a certain slot in a common channel per Fig 2 and per col. 5 lines 20-67.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the apparatus of the combination of Samamoto and Guo in order to build a device which minimizes the interference.

Referring to claim 32, the combination of Samamoto and Guo teaches the apparatus of claim 26,

The combination of Samamoto and Guo do not expressly call for: wherein the comparison result includes a data rate control parameter generated by each base station indicating whether a particular mobile station should increase, decrease or maintain its current data transmission rate. Guo teaches: sending a rate control in a PDCB channel which is inherently indicates whether a particular mobile station should increase, decrease or maintain its current data transmission rate per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the rate control of Guo to the apparatus of the combination of Samamoto and Guo in order to build a device which minimizes the interference.

Referring to claim 33, the combination of Samamoto and Guo teaches the method of claim 28, The combination of Samamoto and Guo do not expressly call for: wherein the common channel is newly defined per Fig 2 and per col. 5 lines 20-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add new common channel Guo to the apparatus of the combination of Samamoto and Guo in order to build a device which minimizes the interference.

10. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samamoto (EPO No.: EP 1 067 729 A2) in view of Guo (U.S. Patent No.: 6,389,034) further in view of Rezaiifar (WO 00/149000)

Referring to claim 29, the combination of Samamoto and Guo teaches the apparatus of claim 26,

The combination of Samamoto and Guo do not expressly call for: wherein the interference level is based on a rise over thermal (ROT) parameter.

Rezaiifar teaches: wherein the interference level is based on a rise over thermal (ROT) parameter per abstract

It would have been obvious to one of ordinary skill in the art at the time of the invention to add rise over thermal of Rezaiifar to the apparatus of the combination of Samamoto and Guo in order because rise over thermal is another contributor to interference.

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samamoto (EPO No.: EP 1 067 729 A2) in view of Guo (U.S. Patent No.: 6,389,034) further in view of Wong (GB 2269298A)

Referring to claim 31, the combination of Samamoto and Guo teach the apparatus of claim 26,

The combination of Samamoto and Guo do not expressly call for: wherein the interference level is based on a probability of cell interference of each mobile station.

Wong teaches: wherein the interference level is based on a probability of cell interference of each mobile station per Pg 13 and per Fig 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add determining the probability of a cell of Wong to the apparatus of Samamoto and Guo in order to create a apparatus which minimizes interference.

12. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samamoto (EPO No.: EP 1 067 729 A2) in view of Gilhousen (U. S. Patent No.; 5,603,096) further in view of Guo (U.S. Patent No.: 6,389,034)

Referring to claim 35, Samamoto teaches: 10 per Fig 3 which is a mobile station apparatus in a mobile communications system for controlling a data transmission rate on a reverse link. The MT Control Section which is 14 per Fig 3 has the determining means for transmitting. The MT Control Section which is 14 per Fig 3 is has the adjusting means and is inherently connected to the determining means. The MT Radio section which is 11 per Fig 3 is the transceiver which is connected to both the determining and adjusting means. Samamoto does not expressly call for: details determining an energy transfer level or utilization of a common dedicated channel. Gilhousen teaches the details of determining an energy level per col. 5 lines 25-30. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the details of determining an energy level of Gilhousen to the mobile station of Samamoto in order to build a system in which the mobile's signal exceed the interference background so that the signal can be received. The combination of Samamoto and Gilhousen do not expressly call for: utilization of a common dedicated channel. Guo teaches: utilization of a common dedicated channel per col. 4 lines 48-67 and per col. 5 lines 121-49 and per Fig 4A. It would have been obvious to one of ordinary skill in the art at the time of the invention to add utilizing a common control channel of Guo in place of the channel of the combination of Samamoto and Gilhousen in order to be standards compliant.

13. Claims 4 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen (U. S. Patent No.; 5,603,096) in view of Guo (U.S. Patent No.: 6,389,034) further in view of Rezaiifar (WO 00/149000)

Referring to claim 4, the combination of Gilhousen and Guo teaches the method of claim 1, The combination of Gilhousen and Guo do not expressly call for: wherein the interference level is based on a rise over thermal (ROT) parameter.

Rezaiifar teaches: wherein the interference level is based on a rise over thermal (ROT) parameter per abstract

It would have been obvious to one of ordinary skill in the art at the time of the invention to add rise over thermal of Rezaiifar to the method of the combination of Gilhoussen and Guo in order because rise over thermal is another contributor to interference.

Referring to claim 15, the combination of Gilhousen and Guo teaches the method of claim 12, The combination of Gilhousen and Guo do not expressly call for: wherein the interference level is based on a rise over thermal (ROT) parameter.

Rezaiifar teaches: wherein the interference level is based on a rise over thermal (ROT) parameter per abstract

It would have been obvious to one of ordinary skill in the art at the time of the invention to add rise over thermal of Rezaiifar to the method of the combination of Gilhoussen and Guo in order because rise over thermal is another contributor to interference.

14. Claims 5, 16, & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen (U. S. Patent No.; 5,603,096) in view of Guo (U.S. Patent No.: 6,389,034) further in view of Wong (GB 2269298A)

Referring to claim 5, the combination of Gilhousen and Guo teaches the method of claim 1,

The combination of Gilhousen and Guo do not expressly call for: wherein the interference level is based on a probability of cell interference of each mobile station.

Wong teaches: wherein the interference level is based on a probability of cell interference of each mobile station per Pg 13 and per Fig 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add determining the probability of a cell of Wong to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Referring to claim 16, the combination of Gilhousen and Guo teaches the method of claim 12,

The combination of Gilhousen and Guo do not expressly call for: wherein the interference level is based on a probability of cell interference of each mobile station.

Wong teaches: wherein the interference level is based on a probability of cell interference of each mobile station per Pg 13 and per Fig 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add determining the probability of a cell of Wong to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Referring to claim 21, the combination of Gilhousen and Guo teaches the method of claim 20, The combination of Gilhousen and Guo do not expressly call for: wherein the interference level is based on a probability of cell interference of each mobile station.
Wong teaches: wherein the interference level is based on a probability of cell interference of each mobile station per Pg 13 and per Fig 8.
It would have been obvious to one of ordinary skill in the art at the time of the invention to add determining the probability of a cell of Wong to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

15. Claims 9-10 & 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilhousen (U. S. Patent No.; 5,603,096) in view of Guo (U.S. Patent No.: 6,389,034) further in view of Ejzak (U.S. Patent No.; 6,069,883)
Referring to claim 9, the combination of Gilhousen and Guo teaches the method of claim 1, The combination of Gilhousen and Guo do not expressly call for: wherein each mobile station receives a data rate control parameter from all active base stations to generate a combined data rate control parameter.

Ejzak teaches: wherein each mobile station receives a data rate control parameter from all active base stations to generate a combined data rate control parameter per col. 4 line 43-col. 8 line 37.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add data rate controlling of Ejzak to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Referring to claim 10, the combination of Gilhousen, Guo, and Ejzak teaches the method of claim 8,

The combination of Gilhousen, Guo, and Ezjak do not expressly call for: combined data rate control parameter

Ejzak teaches: combined data rate control parameter

per col. 4 line 43-col. 8 line 37.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add data rate controlling of Ejzak to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Referring to claim 23, the combination of Gilhousen and Guo teaches the method of claim 20,

The combination of Gilhousen and Guo do not expressly call for: wherein each mobile station receives a data rate control parameter from all active base stations to generate a combined data rate control parameter.

Ejzak teaches: wherein each mobile station receives a data rate control parameter from all active base stations to generate a combined data rate control parameter per col. 4 line 43-col. 8 line 37.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add data rate controlling of Ejzak to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Referring to claim 24, the combination of Gilhousen, Guo, and Ejzak teaches the method of claim 20,

The combination of Gilhousen, Guo, and Ezjak do not expressly call for: combined data rate control parameter

Ejzak teaches: combined data rate control parameter

per col. 4 line 43-col. 8 line 37.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add data rate controlling of Ejzak to the method of Gilhoussen and Guo in order to create a method which minimizes interference.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert W. Wilson

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Bob A Phunkulh

BOB PHUNKULH
PRIMARY EXAMINER

RWW
12/20/05